Abstract

The network comprises topographic network devices and communication links interconnecting the topographic network devices. The topographic network devices each have a physical location represented by a topographic coordinate set, and a network address that includes the topographic coordinate set. A message configured for transmission through the network includes a destination coordinate set, which is the topographic coordinate set of a destination network device that is one of the topographic network devices. A topographic network device comprises channels, a coordinate store and a topographic processor. The channels are each configured for connection via a communication link to another of the topographic network devices. The channels include a first channel via which the message is received. The coordinate store stores connected device coordinate sets, which are the topographic coordinate sets of the topographic network devices to which the channels are directly connected. The topographic processor operates in response to the connected device coordinate sets and the destination coordinate set of the message to identify a second channel of the topographic network device to which to forward the message.